

Application No.: 09/854197

Docket No.: SYCS-005

**AMENDMENTS TO THE CLAIMS**

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Previously presented) In a computer network, said network including a plurality of nodes and a plurality of trunks, a method for configuring said network, said method comprising the steps of:
  - providing, at a selected node, software containing routing algorithms, said routing algorithms calculating paths for network traffic, said paths for said network traffic originating at a source node and traveling to a destination node;
  - configuring said plurality of nodes in said network through the use of said software so as to form a virtual ring composed of said plurality of nodes and said plurality of trunks, said virtual ring containing a plurality of working trunks and a plurality of protection trunks, said virtual ring containing a designated entry node for each circuit, said designated entry node designating the node through which said network traffic passes from nodes in the rest of the network which are not part of said virtual ring into said virtual ring, and said virtual ring further containing a designated exit node for each circuit, said exit node designating the node through which said network traffic passes from said virtual ring to other nodes in the rest of the network which are not part of the virtual ring; and
  - repairing a failed path in said virtual ring, by calculating new routes for said network traffic, said new routes originating at said ring entry node and traveling through said ring exit node without traveling through the failed path.

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8. (Original) The method of claim 7 wherein said virtual ring is contained within a single Open Shortest Path First ( OSPF ) area.
9. (Original) The method of claim 7 wherein the routing process for said network includes a signaling component and an optical routing component.
10. (Original) The method of claim 9 wherein the signaling component signals said optical routing component that the signaling component is performing a recovery from said failure.
11. (Original) The method of claim 10 wherein said optical routing component switches said path to include a protection trunk.
12. (Original) The method of claim 7 wherein an alarm indicating signal ( AIS ) is used to signal a path failure within said virtual ring.
13. (Original) The method of claim 7 wherein a path failure in said virtual ring is repaired by reprogramming cross-connects to use a secondary circuit path.
14. (Previously Presented) In a computer network, said network including a plurality of nodes and a plurality of trunks, a method for configuring said network, said method comprising the steps of:
  - providing, at a selected node, software containing routing algorithms, said routing algorithms calculating paths for network traffic, said paths for said network traffic originating at a source node and traveling to a destination node;
  - configuring said plurality of nodes in said network through the use of said software so as to form a virtual ring composed of said plurality of nodes and said plurality of trunks, said virtual ring containing a plurality of working trunks and a plurality of protection trunks, said virtual ring containing a designated entry node for each circuit, said designated entry node designating the node through which said network traffic passes from nodes in the rest of the network which are not part of said virtual ring into said virtual ring, and said virtual ring further containing a designated exit node for each circuit, said exit node designating the node through

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which said network traffic passes from said virtual ring to other nodes in the rest of the network which are not part of the virtual ring; and

configuring said virtual ring so as to assign a protection trunk to more than one calculated path through said virtual ring.

15. (Original) The method of claim 14 wherein the routing process for said network includes a signaling component and an optical routing component.

16. (Currently Amended) In a computer network, the network including a plurality of nodes and a plurality of trunks, a method for configuring the network, the method comprising the steps of:

providing, at a selected node, software containing an optical routing component and a signaling component. The method of claim 15 wherein the signaling component signals said the optical routing component that the signaling component is performing a recovery from a failed path, the optical routing component calculating paths for network traffic that originates at a source node and travels to a destination node;

configuring a plurality of said nodes in the network through the use of the software so as to form a virtual ring composed of the plurality of nodes and a plurality of said trunks, the virtual ring containing a plurality of working trunks and a plurality of protection trunks, the virtual ring containing a designated entry node for each circuit, the designated entry node designating the node through which said network traffic passes from nodes in the rest of the network which are not part of the virtual ring into the virtual ring, the virtual ring further containing a designated exit node for each circuit, the exit node designating the node through which the network traffic passes from the virtual ring to other nodes in the rest of the network which are not part of the virtual ring;

configuring the virtual ring so as to assign a protection trunk to more than one calculated path through the virtual ring.

17. (Original) The method of claim 16 wherein said optical routing component switches said path to include a selected protection trunk.

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18. (Original) The method of claim 17 wherein said selected protection trunk is the protection trunk for more than one calculated path through said virtual ring.

19. (Previously presented) The method of claim 18 further comprising the steps of:  
said entry node receiving notice of a failed working path through said virtual ring;  
switching said network traffic through said virtual ring to said selected protection trunk as part of a replacement path through said virtual ring;  
repairing said failed working path through said virtual ring; and  
switching said network traffic through said virtual ring from said replacement path back to said working path.

20. (Original) The method of claim 14 wherein said virtual ring is contained within a single Open Shortest Path First ( OSPF ) area.